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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/954,528 | 09/17/2001 | Michael John Watson | DC 4952 | 8641 |

7590

02/04/2003

MCKELLAR STEVENS & HILL
POSEYVILLE PROFESSIONAL COMPLEX
784 SOUTH POSEYVILLE ROAD
MIDLAND, MI 48640

EXAMINER

CHAMBLISS, ALONZO

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 02/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/954,528

Applicant(s)

WATSON, MICHAEL JOHN

Examiner

Alonzo Chambliss

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The change of address filed on 1/14/03 has been fully considered and made of record in Paper No. 4.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 9/17/01 was filed before the mailing date of the non-final rejection on 1/26/03. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

3. The drawings are objected to because there is no reference numeral at the end of the leader line in the final product in Fig. 9. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The abstract of the disclosure is objected to because the essential composition of the adhesive and particle size of the filler particles are missing from the abstract. Correction is required. See MPEP § 608.01(b).
5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is

suggested: " DIE ATTACH ADHESIVES FOR SEMICONDUCTOR APPLICATIONS
UTILIZING A POLYMERIC BASE MATERIAL WITH INORGANIC INSULATOR
PARTICLES OF VARIES SIZES ".

Claim Objections

6. Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 1 recites that two substrates are joined and bonded by an adhesive composition. Therefore, claim 4 does not further limit claim 1.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 11-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. In claim 11, the phrase " the adhesive base material is a silicone composition " is vague and indefinite since the phrase constitutes a Markush group in diminishing scope. The silicone composition in claim 11 is part of the Markush group of claim 9. Therefore, claim 11 is indefinite.

10. In claim 13, the phrase " the adhesive base material is a epoxy composition " is vague and indefinite since the phrase constitutes a Markush group in diminishing scope. The epoxy composition in claim 13 is part of the Markush group of claim 9. Therefore, claim 13 is indefinite.

11. In claim 14, the phrase " insulating particles are present in an amount sufficient to obtain an adhesive with linear thermal expansion coefficient before and after any glass transition temperature of less than 240 micrometers/m/°C, between -55 °C and +200 °C when measured at a heating rate of 5 °C/minute " is vague indefinite since first it is not clear from the claim what the amount of the insulating particles are present in order to create the desired result. Secondly, applicant is claiming a desired result without the essential elements in the claim for yielding the claimed invention.

Allowable Subject Matter

12. Claims 1-10 is allowed.

13. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest the combination of a curable polymeric base material and contained in said polymeric base material with an inorganic insulator particles having an average particle size of 1 micrometer to 1000 micrometers and a major axis to minor axis ratio of about 1.0 to 1.5. Inorganic insulator particles being present in the composition in an amount sufficient to provide a planar adhesive bond thickness between substrates being joined by the adhesive. At least one low coefficient of thermal expansion filler having an average particle size of less than 10

micrometers in an amount of at least greater than 50 weight percent based on the weight of the curable polymeric base material, wherein the low coefficient of thermal expansion fillers having sizes of greater than 10 to about 100 micrometers are present in less than 0.1 weight percent based on the total weight of the low coefficient of thermal expansion fillers present in the adhesive composition.

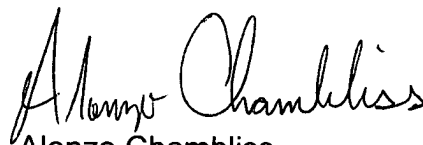
The prior art made of record and not relied upon is cited primarily to show the product and device of the instant invention.

Conclusion

14. Any inquiry concerning the communication or earlier communications from the examiner should be directed to Alonzo Chambliss whose telephone number is (703) 306-9143. The fax phone number for this Group is (703) 308-7722 or 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-7956.

AC/January 27, 2003


Alonzo Chambliss
Patent Examiner
Art Unit 2827